

Stemgent Takes the Work out of Selecting Antibodies for Stem Cell Research

As a stem cell scientist, you have choices when purchasing your stem cell reagents. When it comes to antibodies for characterization, the array of choices can be daunting. Dozens of vendors, hundreds of antibodies... where do you even begin? Unless you have some assistance or a whole lot of free time to validate your choices, you may not be getting the best antibodies suited for your stem cell research. Most vendors only validate on cancer stem cells, but validating on embryonic stem (ES) cells is significantly more meaningful. Here at Stemgent, our stem cell scientists understand that your research requires only the best reagents possible. That's why we've done the screening work for you. We have developed the most stringent guidelines when selecting only the highest performing antibodies for our collection. As a result, you save time and money... and improve your results. Here's our strategy:

We screen multiple antibodies from a variety of sources and validate for specificity, sensitivity, and reproducibility to their corresponding biomarkers. Some vendors may claim their antibodies work on ES cells, but only Stemgent actually verifies the stem cell relevance of each antibody by performing immunohistochemistry (ICC) and flow cytometry (FC) directly on ES cell lines (see anti-Mouse/Human Oct4 antibody example in Figure 1A and 1B, respectively). In addition, to ensure your research is efficient and successful, we further validate our antibodies on both human and mouse ES cells so you don't have to waste your time validating on various species. Only the best performing antibodies make it into our collection.

Figure 1 – ICC and Flow Cytometry Data for anti-Mouse/Human Oct4 Antibody

A)

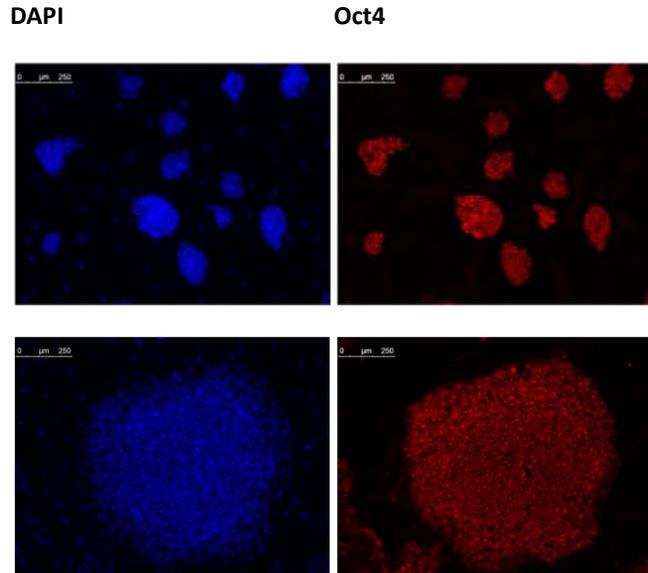


Figure 1A The mouse ES cell line R1 (top panels) and human ES cell line H1 (bottom panels) were fixed and expression of Oct4 was examined using a 1:100 dilution of Affinity Purified anti-Mouse/Human Oct4 (Cat. No. 09-0023) followed by a Cy3 conjugated anti-rabbit IgG antibody (red color). DAPI staining was performed to visualize nuclei (blue color).

B)

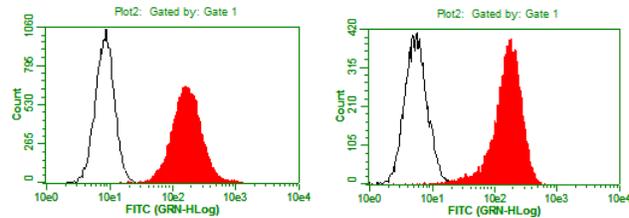


Figure 1B The mouse ES cell line R1 (left) and human ES cell line H1 (right) were stained with Affinity Purified anti-Mouse/Human Oct4 (Cat. No. 09-0023, red filled histogram) or purified rabbit IgG isotype control (black open histogram) followed by FITC conjugated anti-rabbit antibody.

Stemgent’s collection of ES cell-verified antibodies includes the most commonly used cell surface and intracellular markers for mouse/human ES cell pluripotency characterization. We’re always adding to our collection so check back frequently for the most complete offering of highest performing antibodies available for your stem cell research. Use Table 1 to select the antibodies that are best suited for your pluripotency characterization needs.

Table 1 – Stemgent’s Antibody Collection for ES/iPS Cell Characterization

Cat. No.	Product Description	Isotype	Reactivity	ES/iPS Verified Application*
09-0001	Phycoerythrin (PE) anti-Mouse/Human SSEA-1	mouse IgM, κ	mouse	FC
09-0002	Phycoerythrin (PE) Mouse IgM Isotype Control	mouse IgM, κ	mouse, human	FC
09-0003	Phycoerythrin (PE) anti-Human SSEA-4	mouse IgG3, κ	human	FC
09-0004	Phycoerythrin (PE) Mouse IgG3 Isotype Control	mouse IgG3, κ	mouse, human	FC
09-0005	Purified anti-Mouse/Human SSEA-1	mouse IgM, κ	mouse	ICC, FC
09-0006	Purified anti-Human SSEA-4	mouse IgG3, κ	human	ICC, FC
09-0007	Purified Mouse IgM Isotype Control	mouse IgM, κ	mouse, human	ICC, FC
09-0008	Purified Mouse IgG3 Isotype Control	mouse IgG3, κ	mouse, human	ICC, FC
09-0009	Phycoerythrin (PE) anti-Human TRA-1-60	mouse IgM, κ	human	FC
09-0010	Purified anti-Human TRA-1-60	mouse IgM, κ	human	ICC, FC
09-0011	Purified anti-Human TRA-1-81	mouse IgM, κ	human	ICC, FC
09-0012	Phycoerythrin (PE) anti-Human TRA-1-81	mouse IgM, κ	human	FC
09-0013	Phycoerythrin (PE) Rat IgM Isotype Control	rat IgM, κ	mouse, human	FC
09-0014	Purified anti-Human SSEA-3	rat IgM, κ	human	ICC, FC
09-0015	Purified Rat IgM Isotype Control	rat IgM, κ	mouse, human	ICC, FC
09-0019	Purified anti-Mouse/Human Rex1	rabbit IgG, Poly	mouse, human	ICC, FCIC
09-0020	Purified anti-Mouse/Human Nanog	rabbit IgG, Poly	mouse, human	ICC
09-0021	Purified anti-Mouse/Human KLF4	mouse IgG1, κ	mouse, human	ICC**
09-0022	Purified anti-Human LIN28	mouse IgG1, κ	human	ICC**
09-0023	Purified anti-Mouse/Human Oct4	rabbit IgG, Poly	mouse, human	ICC, FCIC
00-0009	Alkaline Phosphatase Staining Kit	NA	mouse, human	Enzyme reaction
00-0013	Stemgent Pluripotency Characterization Kit	NA	mouse, human	ICC, FC

* **FC**: Flow cytometry for surface staining; **ICC**: Immunocytochemistry; **FCIC**: Flow cytometry for intracellular staining

** Proteins expressed in HeLa, 3T3, or murine embryonic fibroblast (MEF) cells

How do you know you are getting the highest performing antibodies for your stem cell research? Go to Stemgent, the experts in stem cell reagents and order today. For further performance data on Stemgent’s ES cell-verified antibodies, visit www.stemgent.com (*this should be a hyperlink to the antibody page located under Products/Antibodies, Biomarkers*). Or give us a call! We’d be happy to talk to you.